Chapter 4

FIRE SUPPORT TECHNIQUES AND PROCEDURES

"I emphasized meticulous planning not simply because I thought it was the most effective approach, which it is, but because by taking that approach you enforce on your subordinates the same necessity. They have to learn every detail of the topography, every position, every soldier they will be facing. And once they do that, they will be able to decide rationally - not intuitively - on the steps they will have to take. They will make their decisions on the basis of knowledge. Experience has taught me that if you lay your plans in detail before you are under the stress of fighting, the chances are much greater that you will be able to implement at least the outline of the plans despite the contingencies of battle."

General Ariel Sharon,
Warrior, 1989

4-1. Synchronizing fires and maneuver is difficult enough even under the most favorable conditions. Its attainment becomes decidedly less likely if not properly planned and prepared for. This chapter presents you with procedures and techniques for better integrating fires with your scheme of maneuver during the MDMP. It also discusses the integration of targeting into both the MDMP and unit battle rhythm, and subsequently, gives you procedures for preparing for combat. The chapter concludes with procedures for the execution of fires and fire support-related actions during mission operations.

PLANNING

Military Decision Making Process

4-2. The MDMP per FM 5-0 (101-5), *Staff Organization and Operations,* presents a process to properly integrate all BOS into a military operation. No changes are required of that process to achieve synchronization between fires and maneuver. What is required, though, is close attention to detail, especially by the staff, and a working knowledge of the inputs, actions and outputs presented under each of the MDMP steps below.

Mission Analysis

4-3. The FSE conducts the fire support portion of mission analysis as part of the battle staff. The following chart depicts inputs coming in to the fire support element, what actions they take, what they produce and your impact, as depicted in the **YOUR INPUT** column, on this step:

INPUTS TO FSE	ACTIONS	OUTPUTS	YOUR INPUT	NEXT ACTION
-Higher HQ OPORD **-Facts** from higher, lower, adjacent FSEs **-IPB** Products – see next page **-Facts** from FS assets	**-Understand** higher OPORD **-Organize** and analyze facts **-Identify** specified and implied tasks **-Translate** status of FS assets into capabilities **-Analyze** effects of IPB on FS. **-Develop** Draft EFSTs	**-FS** portion of mission analysis brief **-Recommend** EFSTs **-Draft** R&S plan	***-Demand* detail in the mission analysis briefing** ***-Approve* or modify draft EFSTs** ***-Give* your intent** ***-Give* planning guidance, to include FS guidance, to the battle staff**	**-Modify** outputs based on Cdr's input **-Issue** warning order (WARNO) **-Begin** COA development **-Develop** fire support plan to support R&S plan

TTP TIP

The top-down fire planning process began with the issuance of the warning order immediately following mission analysis. The FSO should ensure that the approved draft EFSTs are part of the WARNO. By doing this the FSO allows suboardinate commanders and FSOs to begin framing their fire support plan not only within their own concepts of operation, but in concert with the higher headquarters' fire support plan. Later in the planning and preparation process, suboardinate FSOs offer refinement by requesting EFSTs not covered in the higher headquarters' plan

IPB

4-4. This critical part of mission analysis involves input from the entire staff, including the FSO. While the S2 is piecing together the enemy situation, he requires assistance from each BOS. The FSO and DS Battalion S2 should be refining the situation template for enemy fire support systems; the ALO, ADA officer and Aviation LNO (if present) should be refining the situation template (SITTEMP) for enemy air defense systems; and so forth. This will help ensure the best basis for the remainder of the MDMP and targeting process is available.

4-5. Situation templates are the start points for the targeting effort. Poor templates used later in the wargaming process, or during targeting meetings, will result in ineffective targeting. There is no limit (other than time) on the number

of SITTEMPs that can be developed. Consider developing several templates for each enemy COA (under current procedures normally just one is developed). In this manner, you will be able to base your concept of the operation and targeting decisions on how the enemy will look **when** you want to attack them.

4-6. IPB products include a HVT list (those assets that the enemy commander requires to successfully complete his mission); enemy COAs [description and graphical depiction (situation template)]; and event templates (SITTEMPs overlayed to determine NAIs - though this product will continue to be revised).

- Selected HVTs become high-payoff targets and EFSTs through wargaming and subsequent targeting meetings.

- Enemy COAs form the basis for friendly COA development as initial targeting decisions are recommended (what to attack with whom).

- Event templates form the basis for the initial R&S plan and are further developed during COA analysis.

Commander's Intent

Commanders Intent is described as a *"...clear, concise statement of what the force must do to succeed with respect to the enemy and the terrain and the desired end state. It provides the link between the mission and the concept of operations by stating the key tasks that, along with the mission, are the basis for subordinates to exercise initiative when unanticipated opportunities arise or when the original concept of operations no long r applies..."*

FM 101-5, Staff Organization and Operations, 31 May 1997

4-8. Long, vague intent statements detract from synchronization by *fogging-up* how you see maneuver and fires working together. If it's not clear to you, it's probably not clear to your S3, FSCOORD, or FSO, either. There is no commander's intent for fires. There is but one intent statement per commander, nested in the higher headquarters' concept of operations, and providing the foundation for a comprehensive concept of operations that will be the basis for your subordinate commander's intent statement. Though you do not give a separate intent for fires, you provide guidance to the FSCOORD as discussed below.

Commander's Guidance for Fire Support

4-9. Guidance to the FSCOORD does not have to be any different than

the guidance you give to your subordinate maneuver commanders: give him doctrinally stated **tasks and purposes**. A task for fire support describes a targeting effect against a specific enemy formation's function or capability. The purpose describes how this effect contributes to accomplishing the mission within your intent. Your initial planning guidance for fire support will become the basis for the concept of fires and the fires paragraph. Synchronization in your plan will depend largely on your ability to issue planning guidance to BOS representatives that cause them to develop integrated COAs.

4-10. Consider the following when deciding what to issue for fire support guidance:

- Preferred FS system for the engagement of HPTs. Though the HPTL has not been developed/approved yet, based on the S2's mission analysis briefing you may have an idea of what asset to use (lethal fires, non-lethal fires) and desired effects against potential HPTs.

- Guidance for fires. Consider stating the **task** as an effect on the enemy (per FM 3-100.40, FM 6-20-10, FM 3-09 and FM 3-13) formation (specific element or sub-element of the enemy) that provides the enemy a function (a capability of the formation that is needed for it to achieve its primary task and purpose). State the **purpose** in terms of how the targeting effect will benefit a friendly maneuver formation. Example: Disrupt the ability of SA-7s and 14s to engage lift helicopters from pickup zone (PZ) Blue to landing zone (LZ) X-Ray **(task)** to allow the air assault task force to arrive at the LZ with at least 90% of its forces intact **(purpose).**

TTP TIP

Under severe planning time constraints, another procedure to consider is to relate a specific task and purpose for each fire support asset (field artillery, mortars, close air support, naval gunfire, electronic attack, offensive IO and so forth) to each phase of the operation. This also serves, then, as guidance for subordinate maneuver commanders and their staffs/FSEs to give them an idea of what fire support assets will be doing (for them) throughout the operation.

- Observer plan. Employment of COLTs or Strikers.

- Special Munitions - illumination use, smoke/white phosphorus (WP), ground and air launched precision guided munitions, scatterable mines.

• Counterfire or counterbattery responsibilities you want planned by the FSCOORD. (Must be synched with higher HQ or the counterfire HQ). Guidance on the establishment of (CFZ and call-for-fire zones (CFFZ). Guidance for the security of Firefinder radars (which forces at what time or event?).

• Suppression or destruction of enemy air defense guidance.

• Fire support coordinating measures.

• Protected target list. ROE guidance.

• Guidance for FPFs, minimum safe distances and risk estimate distances.

• Engagement criteria. Guidance on size and type of units you want fires to engage at select points in the operation. (for example: counter-reconnaissance - FA can be used against single, stationary lightly-armored vehicles; main battle area (MBA) - Do not plan on using FA against single vehicles unless a commander requests it.)

COA Development

4-11. As the battle staff begins the steps of COA development, the FSO must conceptualize how to integrate fires into the developing concept of operations. The start points for where and how the FSO recommends the allocation of fire support assets to each COA are the draft EFSTs and commander's guidance for fire support. The fire support endstate for this step of the MDMP is the development of draft fire support plan(s). The targeting process (decide, detect, deliver, assess) begins during this step of the MDMP (more on targeting in a subsequent section).

4-12. COA development should consider the use of all fire support systems, not just field artillery. All members of the targeting team should contribute during COA. Major movement and repositioning of fire support assets during the operation must be considered because they impact the tempo of the operation.

4-13. The following chart depicts fire support inputs, actions, and outputs for COA development and your role in this step:

INPUTS TO FSE	ACTIONS	OUTPUTS	YOUR INPUT	NEXT ACTION
-FS portion of mission analysis brief **-Approved** EFSTs **-Commander's** guidance for fire support	**-Determine** where to find and attack EFST formations **-Identify** HPTs in those formations **-Quantify** effects for EFSTs **-Plan** methods for EFSTs **-Allocate** assets to acquire **-Allocate** assets to attack **-Integrate** triggers with maneuver COA **-Use** battle calculus **-Assist** S2 in R&S plan development	For each COA develop a draft fire support plan that includes: -Concept of fires -Draft FSEM -Draft target list -Draft TSM or modified TSM	**Approve or modify the draft EFSTs, as part of approving COAs, that will be analyzed in the next step.**	**-Modify** outputs based on Cdr's input **-Issue** WARNO **-Prepare** for and conduct COA analysis

EFSTs - Essential Fire Support Tasks
HPT - High-Payoff Targets
COA - Course of Action
R&S - Reconnaissance and Surveillance
FSEM - Fire Support Execution Matrix
TSM- Target Synchronization Matrix
Note: *Examples of these and other planning products are in Appendix B.*

Positioning Fire Support Assets and Observation Planning

4-14. General positioning requirements should be worked out in COA development - these will be refined during the wargame. Have the FSO obtain the position area overlay and/or Paladin axis developed by the DS battalion during its artillery IPB process to assist in coordinating position areas.

4-15. Terrain management considerations should include the following: Locations of delivery units, radars, TOCs, and trains; movement routes and times (will be worked out in detail in the wargame); supply routes; axis for Paladin unit moves (if this procedure is followed).

4-16. Observation planning at brigade begins during this step and addresses those portions of the decide step of targeting that deal with deciding who will observe the target and initiate fires (BRT, Striker, COLT, radar, subordinate units or some other agency) and who will perform BDA (effects). Details of these decisions are worked

out in the wargame. General positioning considerations to support the initial observation plan should be considered in COA development

TTP TIP

As the number of EFSTs, and consequent HPTs, grows during the COA development step and you quickly exhaust the number of brigade-level collection assets to detect and assess those HPTs, consider task-organizing subordinate fire support teams under brigade control, at least for those phases prior to their expected use by battalions and companies. A battalion in reserve, or in a follow (or follow and support) mission may be best suited. The alternative is to task subordinate battalions to execute brigade EFSTs, and then be dependent on their observation plan for the execution of certain essential brigade tasks. The most effective way to synchronize the observation plan is to assign target execution responsibilities to maneuver commanders in paragraph 3.b, tasks to maneuver units, of the OPORD/fragmentary order (FRAGO) and ensure that their elements are properly task organized with appropriate observation capabilities.

COA Analysis and COA Comparison

4-17. The wargame gives the staff the tools to work out virtually all details of the concept of operation. It is also during the wargame that the remainder of the targeting decisions are finalized (pending your approval). As the staff conducts an action-reaction/counteraction drill to cause and respond to enemy acts, the targeting team addresses those actions, in accordance with the scheme of maneuver and concept of fires, that must be executed.

4-18. You can check the thoroughness of the wargame by ensuring the following questions can be answered *for each EFST:*

- What is the task and purpose?
- What effects do we want to achieve?
- Where will we first detect the target?
- Who will detect it?
- When do we expect to detect it?
- When is the latest we can detect it and still attack it to achieve the purpose?

- From where will we detect it?

- How will the detect asset get to its observation location (mode and route)? How long does it take to move there? When must it leave? Does it require security and log support? From whom, when, and where?

- Is the asset detecting the target the same as the one tracking it and initiating fires on it? If so, what is the trigger to attack? If not, who is detecting, who is tracking, who is initiating fires, and how is the information passed among them?

- Is there a backup designated to detect, track and initiate fires? If so, ask the above questions about the backup. If not, why not? What asset/unit will attack the target?

- From where will they attack it? Do they have to move to attack the target? On what route, and for how long? When would they have to initiate movement?

- When will they attack the target? When is the latest they can attack the target and still achieve the purpose?

- Is there another asset designated to attack the target (backup or secondary)? If so, then when, what is the latest time for their attack? If there is no back up, why not?

- Does the attack of the target necessitate any prerequisite actions for the maneuver staff? What are the details of the prerequisite actions?

- Who will assess effects? From where? When?

- How will BDA get reported and to whom? Who will make a re-attack decision? When is the latest desired effects can be achieved through re-attack and still fulfill the purpose of attacking the target?

- How will the results of attacking this target get disseminated to the maneuver unit whose scheme of maneuver is affected by the capabilities this target possesses? (Both command and fire support channels?)

4-19. Depicted in the chart below are the inputs, actions, and outputs for the FSE during COA analysis. Your input for this step is, as part of approving the wargame, modifying and/or approving the final drafts of the fire support plans - one per COA wargamed.

INPUTS TO FSE	ACTIONS	OUTPUTS	YOUR INPUT	NEXT ACTION
For each COA to be wargamed: **-Concept** of fires **-Draft** FSEM **-Draft** target list **-Draft** TSM or modified TSM **-R&S** Plan **-Requested** EFSTs from subordinates	**-Targeting** decisions: finalize HPTL **-Wargame** fire support plan(s) against enemy COAs **-Modify/refine** inputs as required **-Refine** and test fire support plan	Final drafts of: **-Fires** paragraph **-Fire** support annex to include: **-FSEM** **-Target** List **-Target** overlay **-TSM** or modified TSM	**Approve wargame if not a participant**	**-Modify** outputs based on Cdr's input **-Prepare** COA decision briefing

4-20. By this time in the planning process, subordinate units should have developed at least draft EFSTs in support of their concept of operation. Some of these subordinate units EFSTs are refinements to the EFSTs your headquarters sent in WARNOs. Other EFSTs are submitted for your staff's consideration because your scheme of fire support did not adequately support the subordinate unit's scheme of maneuver. The staff must integrate all EFSTs into the wargame and determine either how to execute each one, or, which EFSTs cannot be executed due to lack or resources. Subordinate commanders should be immediately notified which of their requested EFSTs are not in the higher headquarters scheme of fires (your staff should be informing you also for your approval).

COA Approval and Essential Fire Support Tasks

4-21. During this step, you are approving the fire support plan as part of the approved course of action. Inherent in your approval is the assignment of essential fire support tasks to subordinate or supporting units.

4-22. EFSTs for your plan have been under development and revision since mission analysis. By this time, they ought to be in the format in which they will appear in the OPORD. Within each phase of an operation, each E FST will be described in the sequenceof planned execution using a TASK, PURPOSE, METHOD, EFFECTS format.

4-23. The FSE will use the inputs and actions depicted below to produce outputs for your consideration. *Your approval of the course of action indicates you are satisfied with the degree of synchronization between maneuver and fires that the plan contains.*

INPUTS TO FSE	ACTIONS	OUTPUTS	YOUR INPUT	NEXT ACTION
-Fires paragraph **-Fire** support annex to include: -FSEM -Target List -Target overlay -TSM or modified TSM	**-Approval** briefing **-Fire** support plan briefed as part of each COA **-FSCOORD** may present analysis as part of the staff	**-Commander** modifies or approves COA **-Issue** WARNO **-Finalize** fire support products **-Issue** OPORD as part of the staff **-Conduct** fire support backbriefs	**-Demand detail in the COA approval briefing** **Approve/ modify fire support plan as part of the approved COA**	**-Manage** refinement **-Prepare** OPORD and briefing products **-Conduct** rehearsals

Orders Briefing

4-24. The primary audience for the fire support portion of this briefing is the commanders or supervisors of those units/individuals responsible for executing EFSTs. The following should be considered during the fire support portion of the OPORD briefing:

- Scheme of fires (includes logical sequence of EFSTs).
- Clearance of fires procedures (if different than SOP).
- FSCMs and restrictions.
- Cutoff times for target refinement and battalion requests for brigade planned fires.
- Rehearsal instructions.
- *Always include in your OPORD confirmation brief a review of EFST responsibilities (who has primary and backup trigger/observation responsibility for TAI or targets; who is firing what munition from where, when; who assess effects, when, how, and from where).*

The Targeting Process and the MDMP

4-25. The targeting process is not a distinct series of actions that occur exclusive of the MDMP. Instead, the targeting process (D3A) begins as

DECIDE *decisions* are made while the staff is conducting the MDMP. Since the battle staff is the targeting team, if the staff conducts the MDMP properly, there is no need during the MDMP to conduct a separate targeting meeting - the results of what the targeting meeting would give you are already being developed as the plan is being built. The chart on the next page depicts how the targeting process fits within the MDMP and the unit's battle rhythm. Targeting during mission execution is covered in more detail later in this chapter.

MDMP Step	Receipt of Mission	Mission Analysis	COA Development	COA Analysis	COA Approval & Orders	Rehearsals	Execution & Assesment
Targeting Process Function	Assemble Target Team [1]	Initial DECIDE[2] Initial DETECT (R&S Plan)	Draft DECIDE[3]	Refine DECIDE [4]	DECIDE Function Continues[5]	Possible Targeting Meeting[6]	DETECT DELIVER ASSESS[7] Targeting Meeting[8]
Targeting Products[11]		HVTs Draft EFSTs	Draft FSEM Draft HPTL Draft TSM Draft R&S Plan	FSEM HPTL TSM R&S Plan		Refined: FSEM HPTL TSM R&S Plan	Refined: FSEM HPTL TSM R&S Plan
Unit Battle Rhythm	Plan	Plan Execute R&S Plan	Plan	Plan	Plan	Prepare & Plan[9]	Execute & plan[10]

See notes on next page

Notes:
1. When separate targeting meetings are convened, the targeting team = battle staff (include non-lethal reps; reference Chapter 2)

2. The initial DECIDE factors developed here are based on enemy COA development, draft EFSTs, other specified and essential tasks, and status of detect and deliver assets.

3. Draft DECIDE factors should address what, how, when, and where to detect an EFST formation; what, how, when, and where to attack that EFST formation; and what, how, when, and where to assess the attack on that EFST formation. Draft HPTs are developed to clarify the EFST.

4. Refined DECIDE factors should address the what, how, when, and where to detect, attack and assess each HPT associated with an EFST.

5. The decisions made up to the point of COA approval and the production of an OPORD form the basis for change for targeting products. Rehearsals, friendly and enemy situation updates, subsequent targeting meetings, and so forth. all can modify previous decisions.

6. If the time between OPORD dissemination and rehearsals allows for the friendly, and especially the enemy, situation to change, or as part of your unit's daily battle rhythm (see note 9), revisit previously made targeting decisions during a targeting meeting.

7. During execution, the DETECT, DELIVER, and ASSESS functions of targeting are conducted in accordance with the concept of operation (as modified by the existing situation) and the commander's intent in a synchronized manner with the scheme of maneuver.

8. Normally, daily and/or event-driven targeting meetings are conducted during execution.

9. Refinements to the current plan continue until the mission is accomplished.

10. During execution, planning continues on branches and sequels to the base plan (tied in with note 8); or, a new mission is received and the MDMP (with its own embedded targeting process) initiated.

11. Brigade is normally the lowest level at which all or most of these products are tangibly produced.

PREPARATION

4-26. Once a synchronized plan has been developed, the unit focuses on the preparation phase of operations. Two key events occur here that have the capability of adding to the level of synchronization between maneuver and fires for the upcoming mission: the combined arms rehearsal and the process of target refinement.

Combined Arms Rehearsals

4-27. The maneuver unit headquarters normally conducts the combined arms rehearsal after subordinate units have issued their OPORD/FASP. This rehearsal ensures that the subordinate units' plans are synchronized with those of the other units in the organization and that those plans will achieve the intent of the higher commander. *A fire support rehearsal should be conducted **prior to** the combined arms rehearsal and if possible should include the maneuver S2 and S3 and other members of the targeting team as appropriate.*

4-28. Key fire support points that should be addressed during the combined arms rehearsal include:

- Responsibilities and actions for the execution of EFSTs, with triggers.
- Positioning and movement plans for fire support assets, with triggers.
- Verification of the R&S plan to support targeting and the target acquisition plan to support counterbattery fire, to include radar zone management, with triggers.
- Current and planned fire support coordinating measures, with triggers and procedures for changing/moving.
- Clearance of fires procedures.
- CAS and JAAT actions, with A2C2 measures and ACA, SEAD and other enablers.

TTP TIP

Have the individual(s) responsible for executing the method of EFSTs participate in the rehearsal. It detracts from synchronization if, for example, the S2 depicts an enemy action that triggers an attack by fires and the FSO explains that COLT 1 has observed the action, will initiate planned artillery fires, and will assess whether X effects were achieved. The FSO is not executing the task, therefore he should not be practicing it at the rehearsal.

The Fire Planning Process

4-29. Fire planning is a continuous process of planning and coordinating fire support requirements. It is usually top-down driven or initiated (exception being a quick fire plan). Central to the process is the development and execution of EFSTs. Conceptually, a fire plan is the logical sequence of executing EFSTs to support a concept of operation. A fire plan at any level is normally the sum of fire support tasks you receive from higher (these are almost always essential to you), EFSTs you develop, and fire support tasks requested by your subordinates.

4-30. A battalion (task force) must clearly understand not only the brigade concept of fires and how it is synchronized to support brigade maneuver but also the battalion's role in the brigade scheme of fires so that the battalion can execute its portion. The battalion must also develop its own concept of fires involving EFSTs assigned from brigade and targets to support the battalion close/direct fire fight. The battalion scheme of fires (including both brigade and battalion targets) is passed down to the companies where another level of refinement is conducted. After the companies refine and forward their fire support requests to battalion, the battalion consolidates, resolves duplications and forwards the battalion concept of fires and target refinements to brigade.

4-31. The following chart depicts brigade and battalion roles in this process.

Brigade Role in Fire Support Planning	Battalion Role in Fire Support Planning
-Synchronize the brigade concept of fires with brigade maneuver **-Develop brigade scheme of fires and assign EFSTs to subordinates** **-Provide fire support for battalion close/direct fire fight** **-Integrate refinements from subordinates** **-Integrate movement of fire support assets into the scheme of maneuver**	**-Understand the integration of brigade maneuver and fires** **-Understand battalion role in the brigade scheme of fires/maneuver** **-Execute assigned EFSTs** **-Develop battalion concept and scheme of fires** **-Integrate and refine brigade EFSTs for close/direct fire fight** **-Plan for the synchronization of battalion mortars with the scheme of fires and their movement with the scheme of maneuver** **-Manage refinement from companies** **-Forward battalion concept of fires and target refinements to brigade**

4-32. Initial targeting decisions are based on templates that must be refined through execution of the R&S plan and analysis of reported intelligence data. As more accurate information on the enemy is obtained, target lists must be updated and disseminated. Target data refinement considerations include:

• Changing target locations, but not the purpose of the target. The purpose of the target was established during the MDMP and is linked to the EFST for which that target was developed. Changing the purpose implies a new EFST and involves commander, or at least S3, approval.

• Enforce target refinement cutoff times. Target cutoff is the latest time when a higher FSE will accept information changes on targets (location being the most prevalent) from a lower FSE. Cutoff times are established to ensure all commanders, fire supporters target acquirers and key decision-makers have the **single approved** target list/scheme of fires prior to an operation starting. This does not preclude the attack of targets of opportunity, but it does allow for proper positioning of fire support assets based on the location of planned targets assigned to those assets and allows for the most accurate location to be disseminated to the delivery assets-a critical factor when fires are initiated using a target number vice grid coordinate

EXECUTION

4-33. During a battle, the positioning of the FSCOORD and FSO is dependent on your location (normally the FSCOORD is with you) and whether you have established a tactical (TAC) CP (normally the FSO will

accompany the S3 at the TAC CP). Regardless, during execution they should be able to tell you at any given time, much like a subordinate maneuver commander, the status of fire support assets and what fires are doing. The following paragraphs discuss procedures for common fire support-related activities that occur during mission execution.

Focusing Fires and the Brigade and Task Force Fights

4-34. As EFSTs are determined during the MDMP using a top-down planning, bottom-up refinement process, fires are integrated into the scheme of maneuver. If the staff has thoroughly wargamed possible enemy and friendly courses of action, the resultant fire support plan is focused. That is, it provides the effects desired by the commander when and where he wants them to help accomplish the mission. During execution, the only thing that should be allowed to desynchronize the plan is (are) enemy actions not previously considered. Since this will almost always occur, you must have a system in place to immediately make D3A decisions, disseminate them and execute them violently. Fighting the enemy (not the plan) in accordance with your guidance provides focus.

4-35. In terms of a *brigade versus battalion fight*, there is only one fire plan. The top-down plan developed and refined during the MDMP and preparation phase should incorporate EFSTs supporting brigade and battalion (and company) schemes of maneuver. As (if) fires shift from deeper to closer targets, execution responsibility tends to shift from brigade to battalion. In executing the fire plan, brigade *does not hand fires off to subordinate headquarters, it hands off the responsibility for executing certain EFSTs to subordinate headquarters*. In this manner, brigade fires remain synchronized with brigade maneuver - while still supporting subordinate maneuver units. The expected conflict between simultaneously attacking targets the battalion wants attacked by fires and targets the brigade wants attacked by fires must be planned for and wargamed in the MDMP.

Clearance of Fires

4-36. Maneuver commanders clear fires. Normally, managing this is delegated to their main command posts and executed by the battle staff under the lead of the FSE. In either analog or digital operations, **silence is not consent** - clearance of fires requires positive action. . **The clearance of fires begins with receipt of the mission and is a part of every step in the MDMP.**

4-37. The first step in effective clearance of fires is the use of maneuver control measures. Any time you can procedurally depict ownership of land the better for clearing fires. If no boundaries are established, all fires short

of the CFL (if established) must be cleared by the higher headquarters instead of the headquarters closest to the fires. While clearing fires is potentially more complicated in distributed, non-linear operations, serious consideration should be given for establishing areas of operation for each subordinate maneuver unit, consistent with the scheme of maneuver.

4-38. Proper use of FSCMs also facilitates the clearance of fires. Permissive measures (if positioned correctly and disseminated to all higher, adjacent, and subordinate units), such as CFLs and free fire areas (FFAs), offer the opportunity for safe responsive fires on targets of opportunity. The size of restrictive measures (no fire area (NFA), RFA) should be verified to preclude unwarranted delays for otherwise safe fires. The next section contains more information on managing FSCMs.

4-39. Pre-clearing fires is one of the most effective ways to ensure troop safety and speed up target engagement.. Units should clear fires during the planning phase. Two instances are: (1) fires into a planned call for fire zone (CFFZ) resulting from a radar acquisition from that planned CFFZ - the CFFZ must have been planned in advance and published in the radar deployment order; and (2) fires on preplanned target, with a definable trigger, against a specific enemy, and according to the scheme of fire support. Other pre-cleared fires should be stated in specific terms. For example, "AB 3001 is pre-cleared through the end of Phase I." Always ensure pre-clearance is disseminated in plans and orders and included in all rehearsals. The more pre-clearance work done in preparation the less delay experienced in execution.

4-40. When fires are requested that are not pre-cleared or allowed by a permissive fire support coordinating measure, they must be positively cleared. This procedure can, in fact, should be a battle drill in command posts.

4-41. In an analog TOC, clearing fires off the situation map is **not** recommended - it will seldom be accurate enough to guarantee the safety of friendly soldiers. Calls for clearance should originate from the requesting maneuver force (probably made by the FSO) over both the fire support net and either the command or operations and intelligence (O&I) net. The TOC responsible for clearing fires should make an Attention in the TOC announcement, read the grid of the target, and get an answer from each BOS representative that no friendlies of that BOS are in danger**. simultaneously**, the TOC initiates a radio net call, over both command and fire support nets, requesting the ground commander(s) to clear a particular grid for attack with a particular asset. (for example., **"Guidons, this is V27, clear fires for grid PU346745, 120mm mortars, over").** Each company commander reads back the grid location and fire support asset

and clears or denies the mission. The TOC then reports back over both nets that the target is clear (or denied).

.

4-42. In a digital TOC with situational awareness maintained through Force XXI Battle Command Brigade and Below (FBCB2) or similar technology, clearance of fires must be addressed the same as above. Unless you can guarantee that every friendly element (including vehicles and dismounts) in your zone has electronically provided their location (not just the FBCB2-equipped, organic units), a drill similar to that discussed for analog operations should be conducted.

TTP TIP

If the clearance of fire drill takes too long (a subjective call on your part based on the tempo of the operation) you may have to re-clear that target to fire because friendly forces could have moved into the target area after or during the initial clearance.

4-43. The AFATDS can both assist and hinder in clearance of fires procedures. It assists by automatically sending a digital request for coordination (clearance) when fires are requested cross-boundary or when an FSCM is violated by a request for fires. The clearance drill must still be accomplished with the responsible TOC, then the results transmitted digitally to the originator. AFATDS can hinder rapid clearance of fires by automatically intervening on calls for fires based on improper, or inaccurate, intervention criteria and safe distance radii relating to FSCM establishment. Ensure your FSO reviews these data closely.

Managing Fire Support Coordinating Measures

4-44. The purpose of this section is to present you with tactical considerations for the placement and size of FSCMs you approve. For FSCM definitions and graphics, see FM 6-20-40, *Tactics, Techniques, and Procedures for Fire Support for Heavy Brigade Operations*.

4-45. When considering the coordinated fire line, there is no requirement to place the CFL on identifiable terrain. Use phase lines as CFLs only if the placement makes sense based on the targets you want to attack with surface fires. If the CFL is placed beyond the concentration of enemy mortars that comprise an EFST, then every Firefinder radar detection will have to be cleared before counterfire can be brought to bear (unless the mortars are in a pre-cleared CFFZ). Friendlies can operate beyond the CFL - they should be protected, though, with NFAs or RFAs and their movements strictly controlled. Cover the trigger(s) and changing of CFLs at combined arms rehearsals to synchronize subordinate commander's scheme of maneuver with targeting team efforts.

4-46. Considerations for NFAs, RFAs and RFLs must include the size of these areas. They should be just large enough to safeguard the force, element, or individual for which they are established. An NFA with a 1km radius established over a COLT position offers a *buffer zone* about five times larger than it needs to be to protect the COLT (munition dependent). With AFATDS, if that observer buffer zone is touched by the artificial criteria of the input target buffer zone (a radius around the target that approximates a particular munition's effects), the mission will be delayed for coordination. As discussed in the clearance of fires section, have the FSO closely review and validate NFA/RFA size as well as target buffer zone inputs for the various munitions. RFLs should be placed on recognizable terrain and are established by the commander common to the converging forces. Consider their use in virtually all offensive operations that entail a support by fire and a maneuver force and in distributed operations where higher headquarters scouts may be operating in your area of operations.

4-471. Formal airspace coordination areas may be recommended at your level, but the air control authority (also ACA) approves them at the air operations center (AOC). Informal ACAs are discussed in the section on CAS integration.

Counterfire and Radar Zone Management

4-48. First and foremost - **if no radar zones are established, Firefinder radars will still acquire targets** (if it is cueing) and will pass the intelligence to the artillery TOC (it can be converted to a call for fire and fired at that time). All the establishment of critical friendly zones (CFZ) and call for fire zones (CFFZ) does is change the format of the Firefinder report to a call for fire and place a higher priority on it. This method allows the initial fire support automation system (IFSAS) and AFATDS to handle it as soon as its received. Still, the proper establishment of radar zones can expedite the reactive counterfire process. See Appendix E for more information on radar zones.

4-49. Consider these factors when establishing zones:

- In the offense, are breach sites and areas directly leading in and out covered by CFZ?

- Can assembly areas, assault and attack positions get CFZ coverage?

- Will a CFZ be placed on the objective(s) during consolidation?

- Are support by fire positions covered with CFZ?

A2C2 and CAS Integration Considerations

4-52. A2C2 procedures and measures are covered in detail in FM 100-13-1 and in general in FM 6-20-40. If you have air assets task organized [including unmanned aerial vehicle (UAV)], your A2C2 element will not only have to deconflict air control measures with division, but also with your scheme of fires to provide uninterrupted air and fire support. (Another opportunity to *overlay the overlays*.)

4-53. Four standard procedures exist to integrate UAV, CAS, and artillery fires with a minimum of disruption: lateral, altitude, time, and, altitude and lateral separation. These are informal airspace coordination measures. If properly planned and coordinated, CAS should not cause indirect fire support to stop, and vice versa.

- Lateral Separation. Used to attack two targets that are close together, one with CAS and the other with artillery. The forward air controller obtains gun-target line information, and passes this to the aircraft to prevent it from crossing the line. This procedure can also be expanded to separate portions of engagement areas for specific weapons.

- Altitude Separation. Used to attack the same target. The maximum and minimum ordinates are passed to the forward air controller so that aircraft stay above/stay below the trajectory of the artillery rounds.

- Time Separation. Used to attack either the same target with different means or several targets in the same engagement area. Indirect fires are controlled by an *At My Command* method of control; CAS is controlled by instructions in the 9-line brief. Indirect fires are dependent on CAS and fired when the airspace is clear until the next sortie arrives.

- Altitude and Lateral Separation. Used to attack several targets within a relatively small area. Also used to provide SEAD fires when the CAS target is between the artillery gun positions and enemy ADA positions. Combines the techniques discussed under the separate headings above.

The Targeting Process During Mission Execution

4-54. During the execution phase of operations, the battle staff (targeting team) is continually assessing the current situation, tracking decision points, possibly preparing some type of update briefing for the commander, and looking towards the future (whether that is 6 to 36 or more hours depends on the level of command and situation). The targeting process allows you to extend the MDMP throughout your operation by giving you a

forum to reconsider *who kills who* decisions and modify or initiate actions to implement those decisions. The process normally occurs within the setting of (informal) targeting meetings. At battalion level, an abbreviated form of a targeting meeting is generally used.

Targeting Meetings

4-55. The targeting meeting is an important event in the unit's battle rhythm. It focuses and synchronizes the unit's combat power and resources toward finding, tracking, attacking, and assessing HPT. The meeting:

- Verifies and updates the HPTL.
- Verifies, updates and re-tasks available collection assets for each HPT.
- Allocates delivery systems to engage each target.
- Confirms the assets tasked to verify the effects on target after it has been attacked.
- Provides a forum for target attack nominations by joint systems.
- Synchronizes lethal and non-lethal actions (to include IO).

4-56. To be effective, if a separate targeting meeting is held, the following personnel should attend the meeting:

- Brigade commander (when available).
- Brigade XO (runs the meeting).
- FSCOORD.
- Brigade S3 (runs the meeting in the XO's absence).
- Brigade S2.
- ALO.
- IO coordinator (if present).
- Brigade S4.
- Brigade Engineer (Assistant Brigade Engineer/Engineer LNO in his absence).

• Brigade ADA Officer (assistant brigade ADAO/ADA LNO in his absence).

• Aviation LNO.

• Brigade S3 Air.

• MI company commander.

• BRT commander and Striker platoon leader.

• Chemical Officer.

• Tactical PSYOP detachment commander.

• Civil Affairs team leader.

• FSO.

• Targeting Officer.

•· DS FA battalion S2 (if available).

• SJA .

TTP TIP

At battalion level an ad-hoc targeting group consisting of the Commander, S2, S3, and FSO is often used to make targeting decisions in an informal targeting meeting.

4-57. The timing of the targeting meeting is critical. It must be effectively integrated into the unit's battle rhythm and nested in the higher headquarters' targeting cycle to ensure that the results of the targeting process can be implemented. Thus task organization changes, modifications to the R&S plan, ATO nominations, changes to the HPTL and specified EFSTs all must be made with full awareness of time available to prepare and execute. While the time-focus for brigade targeting meetings is normally 24-36 hours out, certain targeting decisions, such as ATO nominations, must be planned for in conjunction with the theater or corps ATO cycle - which is usually based on a 72-hour cycle.

Preparation for the targeting meeting

4-58. A key to the successful conduct of the targeting meeting is preparation. Each representative must come to the meeting prepared to discuss available assets, capabilities, limitations, and battle damage assessment (if applicable) related to their BOS. This means participants must conduct detailed prior coordination and be prepared to provide the following inputs and/or information with them as described below.

4-59. The S3 section provides information on:

- Current friendly situation.
- Maneuver assets available.
- Current combat power.
- Requirements from higher headquarters (includes recent FRAGOs or taskings).
- Changes to commander's intent.
- Changes to task organization.
- Planned operations.

4-60. The S2 section provides information on:

- Evaluation of BDA.
- Current enemy situation.
- Current R&S plan.
- Planned enemy courses of action tailored to the time period discussed.
- Collection assets available and those that must be requested from higher.
- Proposed priority intelligence requirement (PIR).

4-61. The fire support section provides information on:

- HPTL, TSS, AGM or a consolidated matrix (for example., TSM).

- Fire support assets available.

- Proposed HPTL for the time period discussed and corresponding changes to FSCMs.

- Higher FS plan that affects unit operations.

4-62. Other staff sections provide information on:

- BOS asset availability and capabilities.

- The integration of their assets into targeting decisions.

- Capabilities and limitations of enemy assets within their BOS.

Conducting the targeting meeting

4-63. The XO (or S3) is responsible for keeping the meeting focused. He opens the targeting meeting by conducting a roll call, followed by a brief explanation of the purpose. He describes the agenda and specifies the time period to be addressed. He is the arbitrator for disagreements that arise (unless the commander is present) and constantly ensures allparticipantsare actively involved, staying on track with the stated purpose and agenda, and are not conducting *sidebar* discussions during the meeting.

4-64. Maximum participation by the staff is essential. Staff members and BOS representatives must share their expertise and respective staff estimate information on the capabilities and limitations of both friendly and enemy systems. They should also consider providing redundant means, if feasible, to detect, deliver and assess targets.

4-65. An example agenda for a brigade (informal) targeting meeting is:

- The S2 provides an intelligence update.

1. Briefs the enemy situation.

2. Reviews the current collection or R&S plans.

3. Provides battle damage assessment of targets engaged since the last targeting meeting and the impact on the enemy course of action.

4. Provides an analysis of the enemy's most probable courses of action and locations for the next 24-36 hours (possibly projecting out 72 hours for targets subject to attack through ATO nominations).

5. Recommends changes to the PIR for the commander's (if present) approval, or review by the battle staff.

- The S-3 provides a friendly situation update.

1. Summarizes the current tactical situation; including new requirements.

2. Informs on the status of available assets (combat power).

3. If the commander is not present, briefs any particular guidance from the commander and changes to his intent.

4. Briefs planned operations during the period covered by the targeting meeting.

- The FSCOORD or FSO provides an update on fire support.

1. Reviews the current TSM (or other targeting products).

2. Reviews status of FS assets.

3. Reviews approved preplanned air requests for the period and those planned for the next two ATO cycles (this may be briefed by the ALO) - normally done in 24-hour increments.

4. Presents a proposed HPTL with locations for the (commander's) staffs concurrence and refinement.

5. Recommends ICW the ALO changes to the working preplanned air requests and nominations for the planning cycle.

- Once everyone understands what the enemy will most likely be doing for the next 24-36 hours, what the friendly plan is, and what targets have been recommended (approved if the commander is present) as HPT, the XO (or S3) completes the D3A process for those HPTs.

1. Decide and prioritize **what** detection assets are responsible for finding the target and triggering attack.

2. Decide **where** you will find the target, trigger its attack, and attack the target.

3. Decide **what** delivery means will be used to attack each target and the effects desired.

4. Decide **when** you will attack each target.

5. Decide and prioritize **what** detection assets will assess effects on the target, from where they will do so, and by when the information must be obtained.

6. Decide re-attack criteria and necessary actions.

•· After all D^3A decisions have been made, **obtain the commander's approval**. Then prepare FRAGOs with new tasks to subordinate units and EFSTs. Rehearse if time permits. Begin (continue) tracking targeting actions by using the products your unit has adopted.